The opinion in support of the decision being entered today was <u>not</u> written for publication in a law journal and is <u>not</u> binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES
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<u>Ex parte</u> KIRK HAYS and WAYNE D. SMITH
_____

Appeal No. 1998-1512
Application No. 07/993,783
_____

ON BRIEF
_____

Before HAIRSTON, KRASS, and BLANKENSHIP, <u>Administrative Patent Judges</u>.

BLANKENSHIP, <u>Administrative Patent Judge</u>.

<u>DECISION ON APPEAL</u>

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final

rejection of Claims 3 and 17.

We affirm-in-part.

BACKGROUND

The invention is directed to a method and apparatus for utilizing Translation

Lookaside Buffers (TLB) for maintaining page tables in a paging unit in a computer

system. Claim 3 is reproduced below.

> 3.   A paging unit for performing linear address to physical address translations in a computer system, said paging unit comprised of:
>
> a)   a first storage area for storing a plurality of page table entries, each of said page table entries containing a physical address to a page in task storage;
>
> b)   a second storage area for storing a subset of said page table entries in said first storage area;
>
> c)   means for comparing a linear address to the contents of said second storage area and if said linear address is in said second storage area, providing said page table entry as a physical address;
>
> d)   control means for pre-loading said second storage area with page table entries corresponding to a task, said page table entries saved from a prior execution of said task; and
>
> e)   means for identifying an entry in said first storage area from said linear address.

The examiner relies on the following references:

Bryg et al. ("Bryg")   5,060,137   Oct. 22, 1991

Motorola, Inc., MC88200 Cache/Memory Management User's Manual § 2, "Memory Management," pp. 2-1 to 2-34 (1988) ("MC88200 User's Manual")

Claim 3 stands rejected under 35 U.S.C. § 102 as being anticipated by Bryg.

Claim 17 stands rejected under 35 U.S.C. § 102 as being anticipated by the

MC88200 User's Manual.

Claims 1, 2, 9, and 10 have been allowed.

Claims 4, 5, and 18-20 have been objected to as depending from a rejected claim,

but deemed to contain allowable subject matter.

Claims 6-8 and 11-16 have been canceled.

We refer to the Final Rejection (Paper No. 11) and the Examiner's Answer (Paper

No. 18) for a statement of the examiner's position and to the Brief[1] (Paper No. 17) and the

Reply Brief (Paper No. 19) for appellants' position with respect to the claims which stand

rejected.

OPINION

The examiner has rejected Claim 3 under 35 U.S.C. § 102 as being anticipated by

Bryg. As appellants point out (Brief, page 5), the examiner misquotes instant Claim 3 in

the statement of the rejection. That is, the examiner uses language from original Claim 3 --

"prior to the execution of [the] task" -- when referring to the "control means for pre-loading."

(See Answer, page 3.) However, the "Response to argument" section of the Answer

makes clear that the examiner has considered the language of Claim 3 as it stands. The

examiner considers the language of Claim 3 to be sufficiently broad to read on the "pre-

loading" of the TLB in Bryg. Since the information that is loaded into the TLB comes from

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[1]We have not considered an earlier brief, filed August 25, 1997 (Paper No. 15), which was held to
lack compliance with 37 CFR § 1.192(c).

the page directory, when the TLB is pre-loaded the information that is placed into the TLB

is information that has been previously saved from a "prior execution" of the task.

Appellants argue that the pre-loading of Bryg is not from page table entries "saved

from a prior execution of [the] task," as required by Claim 3. "To the extent that Bryg

teaches a control means for preloading, it preloads page table entries constructed at the

time of a desired preload." (Brief, page 4, emphasis omitted.) Appellants flesh out their

position in the Reply Brief:

> [Bryg] does not involve a page table entry saved from a prior execution of the
> task. Rather, it involves a page table entry used during a current execution of
> the task and possibly reused during that same execution of the task after
> once being flushed from the TLB. [Bryg] provides no disclosure of task
> switching or what occurs in the event of a task switch.

(Reply Brief, page 2.)

Thus, there does not appear to be any dispute with respect to what the reference

discloses. The controversy relates to the proper interpretation of the claim -- whether the

claim includes within its scope the structure described by Bryg.

Claims are to be given their broadest reasonable interpretation during prosecution,

and the scope of a claim cannot be narrowed by reading disclosed limitations into the

claim. See In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997);

In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); In re Prater, 415

F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969). With these guidelines in mind, we

do not consider the examiner's interpretation of the claim to be unreasonable. The

language of Claim 3 does not distinguish over the TLB pre-loading disclosed by Bryg.

In particular, the claim does not require the "task switching" that appellants allege to

be missing from Bryg. Claim 3 sets forth a "paging unit," which appellants disclose as

being manipulated within task switching applications. However, the terms of Claim 3 are

broader than the written description of the invention. Dependent Claim 4 contains

language that is more nearly commensurate with the arguments presented. Claim 4 adds,

for example, "means for identifying a next scheduled task," and "means for detecting a task

switch." Claim 4 has been indicated by the examiner as containing allowable subject

matter. Claim 3 is not limited to "task switching" applications. Since appellants have not

convinced us that the examiner's interpretation of Claim 3 is unreasonable, we sustain the

rejection of that claim.

We reach the opposite result with respect to the rejection of Claim 17 in view of the

MC88200 User's Manual, however. Appellants argue that "Motorola neither teaches nor

suggests loading page table cache entries of a next scheduled task." (Brief, page 6,

emphasis omitted.) The process of Claim 17 requires, inter alia, "identifying a next

scheduled task," and "loading said page table cache with entries saved from a prior

execution of said next scheduled task."

In light of the remarks on page 5 of the Answer, the examiner appears to consider

Claim 17 as not distinguishing over loading information into the page table cache from the

page table directory. However, the claim is specific with respect to actions taken in

relation to task scheduling, and the corresponding specifics have not been pointed out in

the MC88200 User's Manual. Accordingly, we do not sustain the Section 102 rejection of

Claim 17.

CONCLUSION

The rejection of Claim 3 is affirmed.

The rejection of Claim 17 is reversed.

No time period for taking any subsequent action in connection with this appeal may

be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

KENNETH W. HAIRSTON)
Administrative Patent Judge)
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) BOARD OF PATENT
ERROL A. KRASS)   APPEALS
Administrative Patent Judge)   AND
) INTERFERENCES
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HOWARD B. BLANKENSHIP)
Administrative Patent Judge)

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